

Weekly SARS-CoV-2 Sequencing Summary for the State of Maine

August 27th, 2021

SUMMARY

Critical updates

- 6172 genomes sampled between March 10, 2020 and August 16, 2021 are included in the analysis
- 974 B.1.1.7-like (alpha) Variant of Concern have been identified (3 additional samples since 8/20 report)
- 4 B.1.351 (beta) Variant of Concern have been identified
- 991 B.1.617.2/AY.* (delta) Variant of Concern have been identified (318 additional samples since 8/20 report)
- 128 P.1-like (gamma) Variant of Concern have been identified (4 additional samples since 8/20 report)

Notable Updates

- Pangolin lineage classifications continue to undergo substantial rearrangement of designations.
 - AY.1-AY.30 has been created to capture geographically distinct lineages of B.1.617.2. These lineages are considered under the parent lineage delta. All AY.* sublineages will be reported in aggregate until an individual lineage rises above 5% of cases sequenced in a single calendar month.
 - B.1.526 has been reconfigured with the majority of samples losing their pangolin designation. This is represented as a loss of B.1.526 in this report compared to earlier reports.
 - Q.1 & Q.2 has been created to capture geographically distinct lineages of B.1.1.7. These lineages are considered under the parent lineage alpha. All Q.* sublineages will be reported in aggregate until a single lineage rises above 5% of cases sequenced in a single calendar month.

IMPORTANCE

- Variants of Concern have increased transmission
- Variants of Concern have increased severity of disease based on hospitalization and case fatality rates
- Variants of Concern have decreased susceptibility to therapeutic agents such as monoclonal antibodies
- Variants of Concern could evade natural or vaccine-induced immunity

CAVEATS and CONCERNS

- County information is missing in this analysis for ~45% of samples sequenced externally (e.g. CDC).
- Weekly biases exist due to uneven sampling across the state
- Need to reduce location bias by sequencing more samples from varying facilities and laboratories
- Turnaround times need to decrease to inform infection control practices
- Phylogenetic tree has no county metadata. Public release of county or aggregated-county metadata will aid regional analysis
- Phylogenetic tree has no PHI (an internal tree with PHI should be constructed)

REFERENCES

<https://nextstrain.org/community/tewhey-lab/ncov-ME/latest>
<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-surveillance/variant-info.html>
<https://covariants.org/>
<https://outbreak.info/situation-reports>
<https://nextstrain.org/>
<https://github.com/tewhey-lab/ncov-ME>

Pangolin Lineage	WHO Label	CDC Category	Cumulative Count	May 2021	June 2021	July 2021	Aug 2021
B.1.1.7 / Q.*	Alpha	VOC	974	40.6%	28.3%	1.9%	0.7%
B.1.351	Beta	VOC	4	0.0%	0.0%	0.0%	0.0%
P.1*	Gamma	VOC	128	4.4%	2.5%	1.1%	0.9%
B.1.617.2 / AY.*	Delta	VOC	991	0.3%	3.6%	88.9%	96.7%
B.1.427 / B.1.429	Epsilon	VOI	4	0.0%	0.0%	0.0%	0.0%
P.2	Zeta	VOI	110	0.0%	0.0%	0.0%	0.0%
B.1.525	Eta	VOI	8	0.0%	0.0%	0.0%	0.0%
B.1.526	Iota	VOI	865	32.3%	29.3%	2.7%	0.9%
C.37.*	Lambda	VOI	1	0.0%	0.0%	0.0%	0.0%
B.1.621.*			56	0.3%	10.9%	2.9%	0.0%
Total VOI/VOC Sequenced			3141	833	206	367	427
Total Cases Sequenced			6172	1070	276	377	430

Table 1: Proportion of cases sequenced classified as a variant of interest or concern by month.
Lineages with “*” include the parent lineage and all sublineages (e.g. P.1* include P.1, P.1.1, & P.1.2)

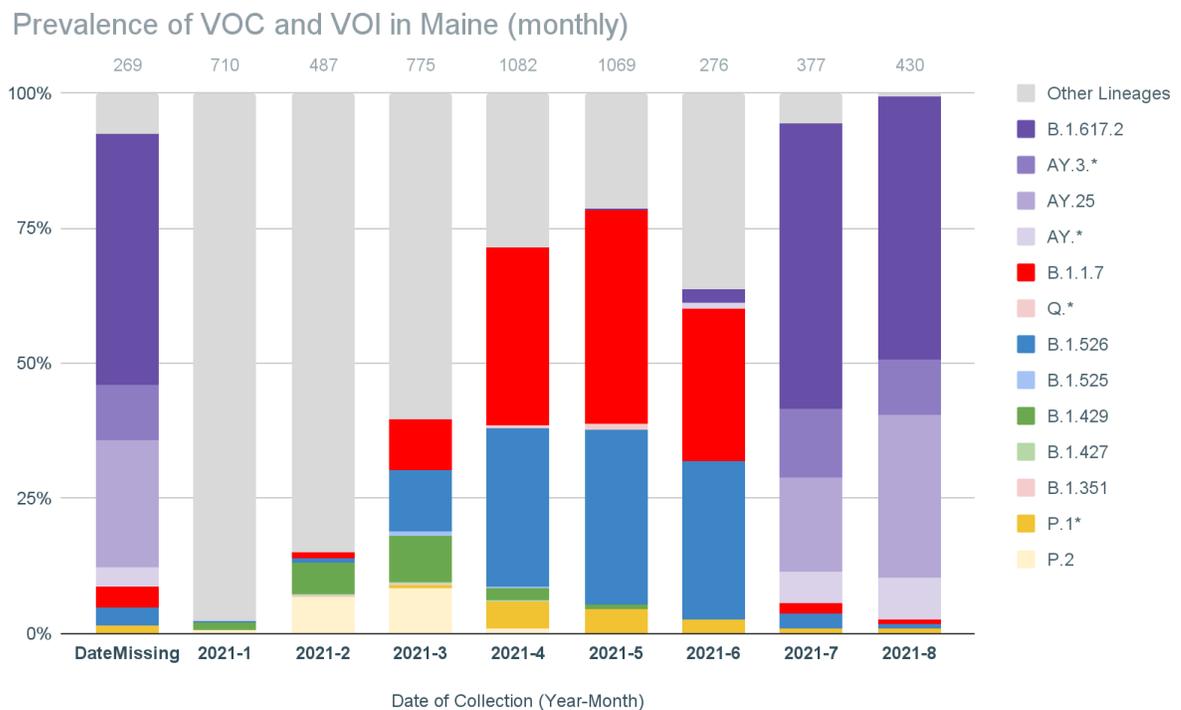


Figure 1: Proportion of samples typed as VOC and VOI by month. Samples represented as “DateMissing” include samples sequenced in the past 60 days without metadata.

Lineages with “*” include the parent lineage and all sublineages (e.g. P.1* include P.1, P.1.1, P.1.2 & P.1.10)
AY.* does not include A.3.* and A.25 which are provided separately.

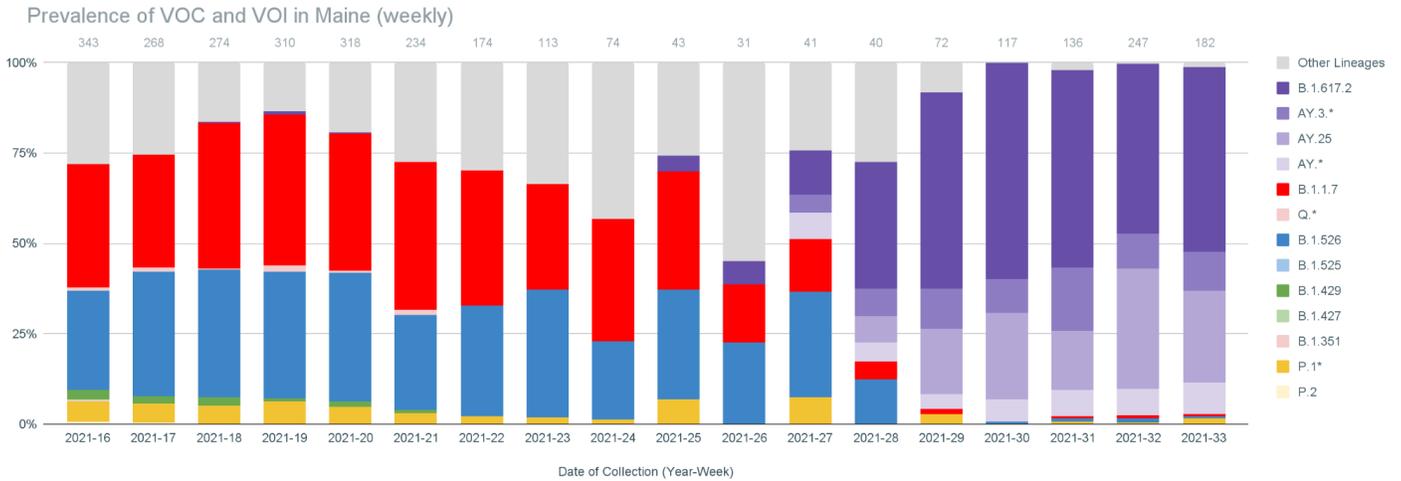


Figure 2: Proportion of samples typed as VOC and VOI by week.
 Lineages with “*” include the parent lineage and all sublineages (e.g. P.1* include P.1, P.1.1, P.1.2 & P.1.10)

Mutation	Gene	Category	Cumulative Count	May 2021	June 2021	July 2021	Aug 2021
S:E484K	Spike	Substitution	545	13.2%	21.4%	4.5%	0.9%
S:L452R	Spike	Substitution	1607	18.5%	25.4%	89.9%	94.7%

Table 2: Proportion of cases sequenced with substitutions of therapeutic concern

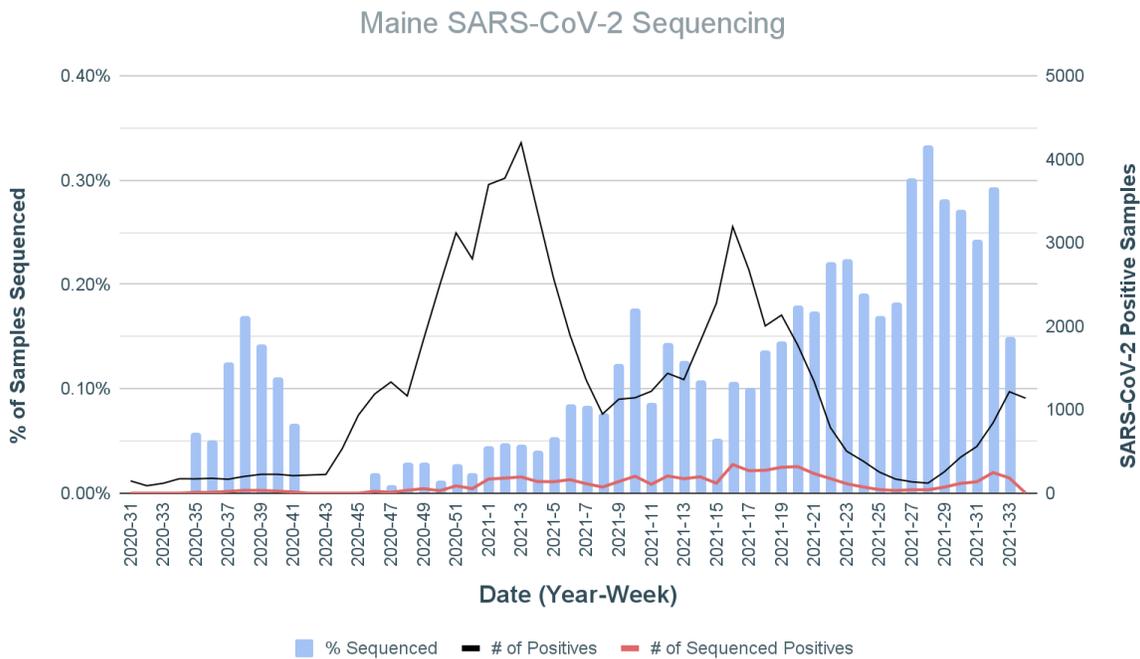


Figure 3: Proportion of COVID-19 positive samples sequenced.

Sample Collection Date	JAX	HETL	CDC	Other
Missing Date	291	0	0	0
Pre-Sept 2020	119	0	0	8
Sept 2020	116	0	0	0
Oct 2020	19	0	0	0
Nov 2020	98	0	0	0
Dec 2020	299	0	12	2
Jan 2021	602	0	88	20
Feb 2021	343	13	120	11
Mar 2021	525	16	215	19
Apr 2021	642	83	341	17
May 2021	703	59	298	10
June 2021	226	0	44	6
July 2021	357	0	18	2
August 2021	408	0	13	9

Table 3: Total number of samples sequenced. Only Sequences passing quality metrics are included. CDC totals include samples from federal contracts (LabCorp, Helix, Broad) and 10 samples requested from HETL every 2 weeks via the NS3 surveillance program.

	Total	07/25/21 - 07/31/21	08/01/21 - 08/07/21	08/08/21 - 08/14/21	08/15/21 - 08/21/21
Total number of cases sequenced	6172	136	247	182	1
Total positive tests by molecular testing	57881	N/A	N/A	N/A	N/A
Total positive tests	84075	559	843	1215	1138
Percent of positives sequenced (molecular)	10.66%	-	-	-	-
Percent of positives sequenced (total)	7.34%	24.33%	29.30%	14.98%	0.09%

Table 4: Total proportion of positive tests sequenced.

Supplemental Table 1: VOC/VOI proportion and total counts by county. Sequences obtained through GISAID (CDC, HETL, Other) are not included in the by-county breakdown.

AY.* does not include A.3.* and A.4 which are provided separately.

Variant	County	Cumulative % (total count)	May 2021	June 2021	June 2021	August 2021
P.1*	ANDROSCOGGIN	1.7% (12)	5.5% (7)	5.9% (1)	0% (0)	0% (0)
P.1*	AROOSTOOK	9.0% (20)	24.5% (13)	0% (0)	5.6% (1)	9.5% (2)
P.1*	CUMBERLAND	2.1% (20)	3.7% (4)	9.1% (2)	0% (0)	2.1% (1)
P.1*	FRANKLIN	1.0% (1)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	KENNEBEC	1.9% (7)	3.2% (3)	0% (0)	3.7% (1)	0% (0)
P.1*	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	OXFORD	1.7% (4)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	PENOBSCOT	3.1% (21)	7.3% (13)	0% (0)	4.9% (2)	0% (0)
P.1*	SAGADAHOC	1.6% (1)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	WALDO	1.2% (2)	0% (0)	33.3% (2)	0% (0)	0% (0)
P.1*	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	YORK	2.1% (13)	3.2% (3)	4.7% (2)	0% (0)	1.9% (1)
P.1*	Total (w/ county information)	2.1% (101)	4.8% (43)	2.9% (7)	1.2% (4)	1.0% (4)
P.1*	Total	2.1% (128)	4.4% (47)	2.5% (7)	1.1% (4)	0.9% (4)
B.1.351	ANDROSCOGGIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	AROOSTOOK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	CUMBERLAND	0.1% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	LINCOLN	2.2% (2)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	OXFORD	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	PENOBSCOT	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	WALDO	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	YORK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	Total (w/ county information)	0.1% (3)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	Total	0.1% (4)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.1.7	ANDROSCOGGIN	17.3% (125)	31.3% (40)	23.5% (4)	0% (0)	0% (0)
B.1.1.7	AROOSTOOK	10.4% (23)	26.4% (14)	16.7% (2)	5.6% (1)	4.8% (1)
B.1.1.7	CUMBERLAND	16.0% (150)	44.4% (48)	22.7% (5)	1.8% (1)	0% (0)
B.1.1.7	FRANKLIN	16.2% (17)	21.4% (3)	62.5% (5)	14.3% (1)	0% (0)
B.1.1.7	HANCOCK	13.0% (16)	34.6% (9)	50.0% (1)	0% (0)	0% (0)
B.1.1.7	KENNEBEC	12.7% (48)	31.9% (30)	41.7% (10)	0% (0)	0% (0)
B.1.1.7	KNOX	11.8% (12)	57.1% (8)	75.0% (3)	0% (0)	0% (0)
B.1.1.7	LINCOLN	42.7% (38)	76.2% (16)	33.3% (1)	0% (0)	0% (0)
B.1.1.7	OXFORD	17.1% (41)	46.9% (15)	53.8% (7)	11.1% (2)	0% (0)
B.1.1.7	PENOBSCOT	15.0% (102)	41.8% (74)	24.5% (13)	0% (0)	1.4% (1)
B.1.1.7	SAGADAHOC	23.0% (14)	52.9% (9)	50.0% (1)	0% (0)	0% (0)
B.1.1.7	SOMERSET/PISCATAQUIS	19.6% (62)	44.3% (39)	12.5% (3)	5.9% (1)	0% (0)
B.1.1.7	WALDO	6.6% (11)	34.8% (8)	33.3% (2)	0% (0)	0% (0)
B.1.1.7	WASHINGTON	10.3% (8)	44.4% (4)	22.2% (2)	0% (0)	11.1% (1)
B.1.1.7	YORK	15.8% (98)	39.4% (37)	25.6% (11)	1.2% (1)	0% (0)
B.1.1.7	Total (w/ county information)	15.8% (765)	39.4% (354)	28.9% (70)	2.0% (7)	0.8% (3)
B.1.1.7	Total	15.5% (956)	39.6% (424)	28.3% (78)	1.9% (7)	0.7% (3)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	May 2021	June 2021	June 2021	August 2021
Q.*	ANDROSCOGGIN	1.1% (8)	3.1% (4)	0% (0)	0% (0)	0% (0)
Q.*	AROOSTOOK	0.5% (1)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	CUMBERLAND	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	OXFORD	0.4% (1)	3.1% (1)	0% (0)	0% (0)	0% (0)
Q.*	PENOBSCOT	0.4% (3)	1.1% (2)	0% (0)	0% (0)	0% (0)
Q.*	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	WALDO	1.2% (2)	8.7% (2)	0% (0)	0% (0)	0% (0)
Q.*	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	YORK	0.3% (2)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	Total (w/ county information)	0.4% (17)	1.0% (9)	0% (0)	0% (0)	0% (0)
Q.*	Total	0.3% (18)	0.9% (10)	0% (0)	0% (0)	0% (0)
B.1.429	ANDROSCOGGIN	1.4% (10)	1.6% (2)	0% (0)	0% (0)	0% (0)
B.1.429	AROOSTOOK	5.4% (12)	13.2% (7)	0% (0)	0% (0)	0% (0)
B.1.429	CUMBERLAND	4.1% (39)	1.9% (2)	0% (0)	0% (0)	0% (0)
B.1.429	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	KENNEBEC	1.9% (7)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	OXFORD	1.7% (4)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	PENOBSCOT	2.9% (20)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	SAGADAHOC	1.6% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	SOMERSET/PISCATAQUIS	0.3% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	WALDO	0.6% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	WASHINGTON	1.3% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	YORK	2.1% (13)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	Total (w/ county information)	2.2% (109)	1.2% (11)	0% (0)	0% (0)	0% (0)
B.1.429	Total	2.3% (142)	1.0% (11)	0% (0)	0% (0)	0% (0)
B.1.525	ANDROSCOGGIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	AROOSTOOK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	CUMBERLAND	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	FRANKLIN	2.9% (3)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	OXFORD	1.7% (4)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	PENOBSCOT	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	WALDO	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	YORK	0.2% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	Total (w/ county information)	0.2% (8)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	Total	0.1% (8)	0% (0)	0% (0)	0% (0)	0% (0)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	May 2021	June 2021	June 2021	August 2021
B.1.526	ANDROSCOGGIN	19.9% (144)	43.0% (55)	35.3% (6)	0% (0)	6.3% (1)
B.1.526	AROOSTOOK	3.2% (7)	7.5% (4)	0% (0)	0% (0)	0% (0)
B.1.526	CUMBERLAND	10.7% (101)	30.6% (33)	45.5% (10)	1.8% (1)	0% (0)
B.1.526	FRANKLIN	11.4% (12)	42.9% (6)	37.5% (3)	0% (0)	0% (0)
B.1.526	HANCOCK	13.8% (17)	38.5% (10)	50.0% (1)	10.0% (1)	0% (0)
B.1.526	KENNEBEC	20.4% (77)	42.6% (40)	37.5% (9)	7.4% (2)	6.7% (1)
B.1.526	KNOX	20.6% (21)	35.7% (5)	25.0% (1)	0% (0)	0% (0)
B.1.526	LINCOLN	4.5% (4)	14.3% (3)	0% (0)	0% (0)	0% (0)
B.1.526	OXFORD	13.8% (33)	18.8% (6)	15.4% (2)	22.2% (4)	0% (0)
B.1.526	PENOBSCOT	11.3% (77)	28.8% (51)	22.6% (12)	0% (0)	2.7% (2)
B.1.526	SAGADAHOC	29.5% (18)	41.2% (7)	50.0% (1)	0% (0)	0% (0)
B.1.526	SOMERSET/PISCATAQUIS	23.3% (74)	37.5% (33)	62.5% (15)	11.8% (2)	0% (0)
B.1.526	WALDO	9.6% (16)	43.5% (10)	33.3% (2)	0% (0)	0% (0)
B.1.526	WASHINGTON	25.6% (20)	44.4% (4)	77.8% (7)	0% (0)	0% (0)
B.1.526	YORK	9.7% (60)	26.6% (25)	4.7% (2)	0% (0)	0% (0)
B.1.526	Total (w/ county information)	14.1% (681)	32.5% (292)	29.3% (71)	2.9% (10)	1.0% (4)
B.1.526	Total	14.0% (865)	32.3% (346)	29.3% (81)	2.7% (10)	0.9% (4)
B.1.617.2	ANDROSCOGGIN	1.2% (9)	0% (0)	0% (0)	45.5% (5)	25.0% (4)
B.1.617.2	AROOSTOOK	11.3% (25)	0% (0)	0% (0)	72.2% (13)	57.1% (12)
B.1.617.2	CUMBERLAND	6.0% (56)	0% (0)	13.6% (3)	52.7% (29)	51.1% (24)
B.1.617.2	FRANKLIN	3.8% (4)	0% (0)	0% (0)	28.6% (2)	40.0% (2)
B.1.617.2	HANCOCK	7.3% (9)	0% (0)	0% (0)	30.0% (3)	54.5% (6)
B.1.617.2	KENNEBEC	4.8% (18)	0% (0)	0% (0)	33.3% (9)	60.0% (9)
B.1.617.2	KNOX	18.6% (19)	0% (0)	0% (0)	50.0% (10)	47.4% (9)
B.1.617.2	LINCOLN	10.1% (9)	0% (0)	0% (0)	55.6% (5)	28.6% (4)
B.1.617.2	OXFORD	5.8% (14)	3.1% (1)	0% (0)	50.0% (9)	75.0% (3)
B.1.617.2	PENOBSCOT	11.8% (80)	0% (0)	3.8% (2)	70.7% (29)	66.2% (49)
B.1.617.2	SAGADAHOC	3.3% (2)	0% (0)	0% (0)	0% (0)	100.0% (2)
B.1.617.2	SOMERSET/PISCATAQUIS	9.8% (31)	0% (0)	0% (0)	82.4% (14)	60.7% (17)
B.1.617.2	WALDO	13.8% (23)	0% (0)	0% (0)	29.6% (8)	22.1% (15)
B.1.617.2	WASHINGTON	7.7% (6)	0% (0)	0% (0)	50.0% (1)	55.6% (5)
B.1.617.2	YORK	11.1% (69)	2.1% (2)	4.7% (2)	48.8% (40)	46.3% (25)
B.1.617.2	Total (w/ county information)	7.7% (374)	0.3% (3)	2.9% (7)	51.5% (177)	48.1% (186)
B.1.617.2	Total	8.8% (544)	0.3% (3)	2.5% (7)	52.8% (199)	48.6% (209)
AY.3.*	ANDROSCOGGIN	1.4% (10)	0% (0)	0% (0)	9.1% (1)	56.3% (9)
AY.3.*	AROOSTOOK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.3.*	CUMBERLAND	1.5% (14)	0% (0)	0% (0)	18.2% (10)	8.5% (4)
AY.3.*	FRANKLIN	1.0% (1)	0% (0)	0% (0)	0% (0)	20.0% (1)
AY.3.*	HANCOCK	1.6% (2)	0% (0)	0% (0)	10.0% (1)	9.1% (1)
AY.3.*	KENNEBEC	3.7% (14)	0% (0)	0% (0)	40.7% (11)	20.0% (3)
AY.3.*	KNOX	5.9% (6)	0% (0)	0% (0)	30.0% (6)	0% (0)
AY.3.*	LINCOLN	1.1% (1)	0% (0)	0% (0)	11.1% (1)	0% (0)
AY.3.*	OXFORD	0.8% (2)	0% (0)	0% (0)	11.1% (2)	0% (0)
AY.3.*	PENOBSCOT	1.0% (7)	0% (0)	0% (0)	4.9% (2)	6.8% (5)
AY.3.*	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.3.*	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.3.*	WALDO	3.0% (5)	0% (0)	0% (0)	7.4% (2)	4.4% (3)
AY.3.*	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.3.*	YORK	3.5% (22)	0% (0)	0% (0)	13.4% (11)	20.4% (11)
AY.3.*	Total (w/ county information)	1.7% (84)	0% (0)	0% (0)	13.7% (47)	9.6% (37)
AY.3.*	Total	1.9% (120)	0% (0)	0% (0)	12.7% (48)	10.2% (44)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	May 2021	June 2021	June 2021	August 2021
AY.25	ANDROSCOGGIN	0.4% (3)	0% (0)	0% (0)	9.1% (1)	12.5% (2)
AY.25	AROOSTOOK	2.7% (6)	0% (0)	0% (0)	11.1% (2)	19.0% (4)
AY.25	CUMBERLAND	2.3% (22)	0% (0)	0% (0)	10.9% (6)	34.0% (16)
AY.25	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.25	HANCOCK	3.3% (4)	0% (0)	0% (0)	20.0% (2)	18.2% (2)
AY.25	KENNEBEC	1.1% (4)	0% (0)	0% (0)	11.1% (3)	6.7% (1)
AY.25	KNOX	8.8% (9)	0% (0)	0% (0)	5.0% (1)	42.1% (8)
AY.25	LINCOLN	10.1% (9)	0% (0)	0% (0)	22.2% (2)	50.0% (7)
AY.25	OXFORD	0.4% (1)	0% (0)	0% (0)	5.6% (1)	0% (0)
AY.25	PENOBSCOT	1.8% (12)	0% (0)	0% (0)	9.8% (4)	10.8% (8)
AY.25	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.25	SOMERSET/PISCATAQUIS	1.3% (4)	0% (0)	0% (0)	0% (0)	14.3% (4)
AY.25	WALDO	39.5% (66)	0% (0)	0% (0)	59.3% (16)	73.5% (50)
AY.25	WASHINGTON	2.6% (2)	0% (0)	0% (0)	0% (0)	22.2% (2)
AY.25	YORK	6.0% (37)	0% (0)	0% (0)	26.8% (22)	27.8% (15)
AY.25	Total (w/ county information)	3.7% (179)	0% (0)	0% (0)	17.4% (60)	30.7% (119)
AY.25	Total	4.2% (258)	0% (0)	0% (0)	17.5% (66)	30.0% (129)
AY.*	ANDROSCOGGIN	0.4% (3)	0% (0)	11.8% (2)	9.1% (1)	0% (0)
AY.*	AROOSTOOK	1.4% (3)	0% (0)	0% (0)	5.6% (1)	9.5% (2)
AY.*	CUMBERLAND	0.5% (5)	0% (0)	4.5% (1)	5.5% (3)	2.1% (1)
AY.*	FRANKLIN	5.7% (6)	0% (0)	0% (0)	57.1% (4)	40.0% (2)
AY.*	HANCOCK	4.1% (5)	0% (0)	0% (0)	30.0% (3)	18.2% (2)
AY.*	KENNEBEC	0.3% (1)	0% (0)	0% (0)	0% (0)	6.7% (1)
AY.*	KNOX	3.9% (4)	0% (0)	0% (0)	10.0% (2)	10.5% (2)
AY.*	LINCOLN	4.5% (4)	0% (0)	0% (0)	11.1% (1)	21.4% (3)
AY.*	OXFORD	0.4% (1)	0% (0)	0% (0)	0% (0)	25.0% (1)
AY.*	PENOBSCOT	1.3% (9)	0% (0)	0% (0)	0% (0)	12.2% (9)
AY.*	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.*	SOMERSET/PISCATAQUIS	2.2% (7)	0% (0)	0% (0)	0% (0)	25.0% (7)
AY.*	WALDO	0.6% (1)	0% (0)	0% (0)	3.7% (1)	0% (0)
AY.*	WASHINGTON	1.3% (1)	0% (0)	0% (0)	50.0% (1)	0% (0)
AY.*	YORK	1.1% (7)	0% (0)	0% (0)	6.1% (5)	3.7% (2)
AY.*	Total (w/ county information)	1.2% (57)	0% (0)	1.2% (3)	6.4% (22)	8.3% (32)
AY.*	Total	1.1% (69)	0% (0)	1.1% (3)	5.8% (22)	7.9% (34)
P.2	ANDROSCOGGIN	0.6% (4)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	AROOSTOOK	2.3% (5)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	CUMBERLAND	0.5% (5)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	FRANKLIN	1.0% (1)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	HANCOCK	13.8% (17)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	KENNEBEC	0.5% (2)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	LINCOLN	4.5% (4)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	OXFORD	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	PENOBSCOT	2.5% (17)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	SAGADAHOC	3.3% (2)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	SOMERSET/PISCATAQUIS	8.5% (27)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	WALDO	1.8% (3)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	YORK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	Total (w/ county information)	1.8% (87)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	Total	1.8% (110)	0% (0)	0% (0)	0% (0)	0% (0)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	May 2021	June 2021	June 2021	August 2021
	ANDROSCOGGIN	45.3% (328)	84.4% (108)	76.5% (13)	72.7% (8)	100.0% (16)
	AROOSTOOK	45.9% (102)	71.7% (38)	16.7% (2)	100.0% (18)	100.0% (21)
	CUMBERLAND	43.9% (413)	80.6% (87)	95.5% (21)	90.9% (50)	97.9% (46)
	FRANKLIN	42.9% (45)	64.3% (9)	100.0% (8)	100.0% (7)	100.0% (5)
	HANCOCK	56.9% (70)	73.1% (19)	100.0% (2)	100.0% (10)	100.0% (11)
	KENNEBEC	47.1% (178)	77.7% (73)	79.2% (19)	96.3% (26)	100.0% (15)
	KNOX	69.6% (71)	92.9% (13)	100.0% (4)	95.0% (19)	100.0% (19)
	LINCOLN	79.8% (71)	90.5% (19)	33.3% (1)	100.0% (9)	100.0% (14)
	OXFORD	43.8% (105)	71.9% (23)	69.2% (9)	100.0% (18)	100.0% (4)
	PENOBSCOT	51.2% (348)	79.1% (140)	50.9% (27)	90.2% (37)	100.0% (74)
	SAGADAHOC	62.3% (38)	94.1% (16)	100.0% (2)	0% (0)	100.0% (2)
	SOMERSET/PISCATAQUIS	65.0% (206)	81.8% (72)	75.0% (18)	100.0% (17)	100.0% (28)
	WALDO	77.8% (130)	87.0% (20)	100.0% (6)	100.0% (27)	100.0% (68)
	WASHINGTON	48.7% (38)	88.9% (8)	100.0% (9)	100.0% (2)	88.9% (8)
	YORK	51.9% (322)	71.3% (67)	39.5% (17)	96.3% (79)	100.0% (54)
Total VOI/VOC Sequenced	Total (w/ county information)	50.9% (2465)	79.3% (712)	65.3% (158)	95.1% (327)	99.5% (385)
Total VOI/VOC Sequenced	Total	52.2% (3222)	78.6% (841)	63.8% (176)	94.4% (356)	99.3% (427)
	ANDROSCOGGIN	724	128	17	11	16
	AROOSTOOK	222	53	12	18	21
	CUMBERLAND	940	108	22	55	47
	FRANKLIN	105	14	8	7	5
	HANCOCK	123	26	2	10	11
	KENNEBEC	378	94	24	27	15
	KNOX	102	14	4	20	19
	LINCOLN	89	21	3	9	14
	OXFORD	240	32	13	18	4
	PENOBSCOT	680	177	53	41	74
	SAGADAHOC	61	17	2	0	2
	SOMERSET/PISCATAQUIS	317	88	24	17	28
	WALDO	167	23	6	27	68
	WASHINGTON	78	9	9	2	9
	YORK	620	94	43	82	54
Total Cases Sequenced	Total (w/ county information)	4846	898	242	344	387
Total Cases Sequenced	Total	6172	1070	276	377	430